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THE SKUNK AS A SOURCE OF RABIES.

BY W. WADE.

Doubtless many of the readers of the NATURALIST have heard the story that the bite of a skunk can convey rabies. I first heard it some years since in the form of an inquiry from a distinguished physician in London; and to an old fox-hunter, who has known of hounds by the dozens being skunk-bitten with no subsequent ill-effects, the story was exceedingly ridiculous. But when my friend stated that Dr. John H. Janeway, a surgeon in the U. S. Army, was said to have given the story his endorsement in a New York medical journal, the matter became immediately worthy of most serious consideration, my friend suggesting that there might have been something in the environments of the skunk, at the time Dr. Janeway wrote, to account for the marvelous exception, and I at once set to work to investigate what was known on the matter. Immediately I was involved in a maze of contradictions, no two stories agreeing. No belief of the story could be found anywhere but in Texas, the Indian Territory, and adjacent districts. Even in southern Kansas no such belief was found. Then in some cases it was the skunk, *Sui generis*, that had this power, while again it was only one particular variety of the skunk, the "hydrophobia cat." The vulgar idea was that any skunk, rabid or non-rabid, was capable of conveying infection of rabies, while more intelligent observers held that only a rabid skunk had this power, but even these seemed to hold that there was special danger of skunks being rabid, or that the virus conveyed by their bite was more potent than that from any other rabid animal. Again, instances were cited of men dying as the result of a skunk bite; in one case after many months of lingering illness, which most certainly could not be rabies, or another case of a man exhibiting rabic symptoms after a skunk bite but recovering on copious bleeding, and evidently there was no rabies *there*. Again, the New

York Sun, about six months since, had a most blood-curdling story of many soldiers in Mississippi dying from the bite of a skunk, and the deaths spread over a period of several months, a marvelously long-lived skunk to live a month after rabies had developed to the stage of being communicable, and inquiries in Mississippi showed that no fatal case of skunk bite was ever known there, although skunks were sometimes kept as vermin killers.

Now remember that this story drew all the weight it could have from the allegation that *Dr. Janeway had endorsed it*, and remember further, that the belief was that the skunk, *at present*, had this power. At last I was able to get Dr. Janeway's paper, which was published in The Medical Record of New York, March 13, 1875, and a more ridiculous breaking down of a ridiculous myth I never saw.

It appears that Dr. Janeway was stationed at Fort Hays, Kansas, when an epidemic of rabies broke out in the surrounding country, and his paper in the Medical Record was based on his report to the Surgeon-General of the U. S. Army; and in a letter to me he says that after writing this paper to the Medical Record, he endeavored to trace the origin of the epidemic, and if he remembers aright, found by inquiries that it was first noticed in the northern tier of Texas counties, and travelled north by west to the Fort Hays reservation.

So far from Dr. Janeway stating that *any* skunk could convey rabies, he distinctly refuted the assertions of some clergyman to this effect, citing instances of dogs and men being bitten by a skunk without injury (and one case wherein one person died and two escaped unhurt from the bite of the same rabid wolf). Dr. Janeway gives a very qualified adhesion to the belief that the bite of a rabid skunk was fatal in a larger proportion of instances than the bite of other animals, and thus explains it:

"That more cases, proportionally, may result fatally from the bite of this animal than from the bite of rabid dogs and wolves, is probably, if not actually, the case; still there are obvious reasons for it to be so. An animal, nocturnal in its habits, generally timid, but armed with a powerful battery to

resist any injury or affront ; one that will not bite in defence until the secretion provided for it by nature is exhausted, loses that secretion by the disease. It is a well authenticated fact that rabid skunks are entirely free from the odor so characteristic of these animals, which could not occur if the secretion were not exhausted ; and forgetting its normal timidity, will attack any person or animal it may come in contact with, biting the most exposed parts of the body, the alæ of the nose, the lobe of the ear, the thumb or one of the fingers, and passes on. Here is probably the reason these bites are more fatal than those of other animals—always in a vascular part not protected by clothing—which prevents by wiping away the poisonous saliva, from the fierce attacks of the mad dog or wolf and thus saves the life of the one bitten.” This is very intelligible and reasonable.

Then, even those who believe that only the *rabid* skunk conveys rabies by its bite, and that the skunk is more susceptible to rabies than other animals, seem to believe that this is the *present* state of affairs, that skunk bites are *now* peculiarly dangerous. Now Dr. Janeway expressly says that rabies was epidemic in Texas when he made his observations on the disease in skunks and other animals, thus : “ Rabies Mephitica, like Rabies Canina, is evidently epidemical, no cases of it having been reported previous to 1870 in this region ; ” and in his letter to me of December 15th, he says : “ The epidemic was short-lived, no cases that I heard of occurring the next year. A great number of skunks must have succumbed to the disease, as they were less plentiful after that season ; ” and further, a surgeon in the U. S. Army, now stationed at Fort Bliss, writes me : “ I have served five years in Texas, four in the Indian Territory, four in Dakota and other places where skunks abound ; during this time, I have never known any one to be bitten by the animal referred to. The bite of a rabid skunk will, of course, produce the disease, and in other instances where serious trouble has followed this occurrence, I am of the opinion that the symptoms are due to septic poisoning. The bite or scratch of almost any animal is more or less poisonous from the bacteria always present on the teeth.

and claws. Even *human saliva* is poisonous when injected into certain animals, as has been conclusively proved by our present Surgeon-General."

Now I have never been able to get hold of anybody, in Texas or elsewhere (of course, other than Dr. Janeway), that had ever seen a case of skunk rabies, or who had anything like definite evidence on the matter; "I have heard it," "It is generally believed," etc., has been the utmost limit of statements on this point. Some believe it themselves, but are completely "out of reasons for it." One well-known naturalist puts his views on the question in this form:

"1st. The bite of the skunk often communicates rabies and death.

"2nd. Skunk rabies kills more people than dog or wolf rabies.

"3rd. To be bitten by a skunk is to risk a terrible death.

"4th. Beware of all skunks, for one can never tell when a rabid skunk will come along."

And perhaps this expresses intelligent, but incorrect, belief on the subject as well and accurately as it can be done. Therefore let us examine what the actual evidence on the matter is. Dr. Janeway, like any intelligent physician would do, refutes the self-originating idea of rabies in the skunk (and parenthetically, a physician with all the light of recent knowledge as to rabies, tells me that Dr. Janeway's conclusions are singularly sound and conclusive, when the deficiency of exact knowledge on the disease, then the case, is taken into consideration). That idea is such utter nonsense that only the erroneous assertion of Dr. Janeway's endorsement entitled it to a second thought. Then Dr. Janeway positively says in his paper in *The Medical Record* that rabies was epidemic when he made his observations, and he adds in his letter to me that this epidemic was so transient that in one year it had passed away. (Scientific men have suggested, as the probable explanation of such epidemics wearing themselves out, that the subjects die off faster than they can communicate the disease to fresh victims). A surgeon in what is now the central seat of belief in the "skunk-rabies" delusion has not heard of a

case in the nine years he has been in this district. A physician in Southern Kansas, not remote from Fort Hays, wrote me that he had never heard of the skunk-rabies belief, that skunks were not uncommon as pets in his neighborhood (deprived of their scent powers, I believe). From Southern Colorado to North Dakota, I can find no belief prevailing in this myth. Then it all amounts to this: Dr. Janeway made careful observations twenty years ago, during an epidemic, he says this epidemic lasted only a year. A surgeon in the U. S. Army tells us that the ill effects that *do* sometimes follow skunk bites may readily be accounted for as septic poisoning, just as might result from the bite of a fly or the scratch of a tiger's claws. Therefore, my answers to the points I quote from a well known naturalist are:

1st. The bite of a non-rabid skunk can communicate no *rabies*, and it is beyond question that rabid skunks are exceedingly rare, if found at all. In no part of this country were rabid skunks ever reported save during a short period of epidemic rabies in Texas and Kansas.

2nd. Skunk rabies perhaps killed more people in Texas, etc., during a certain period than canine rabies, but because sleeping in the open air ("camping") was common there and the skunks readily encountered men. I think that statistics would show that dog and wolf rabies has caused twenty times the deaths that skunk rabies has.

3rd. To be bitten by a skunk is to risk contracting septic poisoning, I believe a terrible death, and the bite of a fly is said to have produced the same disease, and I think a butcher cutting himself with his butchering knife is in the same danger, but none of them risk *rabies*.

4th. Well, yes, "beware of all skunks" on "smelling" grounds, but it might as well be said "beware of all dogs, for one can never tell when a rabid dog may come along."

Minimizing dangers that are real is most dangerous and reprehensible, but making spooks of mist is but little less so. Some boy reads or hears that skunk-bite "will make a man go mad," some day he does get a skunk bite, and we can easily imagine the terrors he suffers from, and all from the veriest bosh.

The subject of rabies is now loaded down with quite enough rubbish, such as the absurd notion that if a healthy dog bites a man and subsequently becomes rabid, the man will "go mad" also, and adding another piece of bosh is more than we ought to be afflicted with.

I fear I may just now be venturing beyond my depth, and therefore, I wish the following to be taken entirely as suggestive: Must it not have been under very exceptional circumstances that rabies was first introduced among skunks in Texas? It surely is true that rabies is especially a disease of the canidæ, dogs, wolves and ? foxes. Now a rabid dog (and I suppose, a rabid wolf), in the stage of the disease in which communication of infection is possible, is about destitute of intelligence. It runs blindly, wildly, and without purpose. The skunk is both nocturnal and retiring, and would easily and naturally get out of the way of a rabid dog "on the run." In Europe where rabies is more prevalent than in this country, the polecat and other animals, relatives and of similar habits to the skunk, are never known to be rabid. So how in the world did the first rabid skunk become so? Unquestionably there *were* rabid skunks, and almost certainly there was a first one who communicated the disease to its fellows, and does it not seem certain that this first victim became infected under most peculiar and exceptional circumstances, and that these are not likely to be repeated? And, as a final wind-up, What is all this pothor about? There is not a particle of evidence that skunk bites are particularly dangerous, and while nobody need wish for such a bite, if he *does* get it he need not worry himself about any danger of rabies.